

REMARKS

Applicants have thoroughly considered the June 18, 2007 Office action. This Amendment A amends claims 1, 4-6, 8-10, 22-24, 27, 34, and 42-50 and cancels claim 3 to more clearly set forth the invention. Applicants respectfully request that favorable reconsideration of the application in light of the amendments and following remarks.

Applicants acknowledge the acceptance of the drawings filed on August 5, 2003 and the initialed Information Disclosure Statements mailed on June 8, 2006 and August 9, 2006.

Claim Objections

Claims 1-10 and 34-37 stand objected to because of minor informalities. Applicants have amended claims 1, 4-6, and 34 to establish the proper antecedent basis for the terms "client," "latency information" and "client system" in claims 1, 4-6, and 34, respectively. Applicants therefore request the withdrawal of the claim objections.

Rejection under 35 U.S.C. §112

Claims 8 and 22-24 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicants have amended the claims 8 and 22-24 to remove the terms "and subcombinations thereof." Therefore, the rejection of claims 8 and 22-24 under 35 U.S.C. §112, second paragraph, should be withdrawn.

Rejection under 35 U.S.C. §101

Claims 10, 27, and 42-50 stand rejected under 35 U.S.C. §101 because the claimed invention is directed to non-statutory subject matter. In further advancing the prosecution of the application, Applicants have amended claims 10, 27 and 42-50 by reciting "computer-readable storage medium." (See also paragraph [0035] of the Specification). Applicants submit the amended claims fall within the statutory subject matter. Furthermore, amended claims 42-50 recite functional language that further

clarify embodiments of the invention. Therefore, the rejection of claims 10, 27 and 42-50 under 35 U.S.C. §101 should be withdrawn.

Rejection under 35 U.S.C. §102

Claims 1-2, 4-6, 10, 12-16, 21, 27, 30-32, and 38 stand rejected under 35 U.S.C. §102(b) as being anticipated by Bland et al (U.S. Pat. No. 5,732,218). Applicants submit that the cited reference fails to disclose or suggest each and every element of the invention.

As an overview, Bland discloses a system for gathering and reporting data relating to interactions between a server and a client. Bland also discusses sending the gathered data from the client to the server in response to a server request for the client to gather the requested data. The client, in response to the server request, sends the gathered data to a uniform resource location (URL), which may identify the server.

On the other hand, embodiments of the invention disclose a more efficient and improved interaction monitoring system without having a request from the server to the client and without requiring the client to specifically send the gathered data to the server in a specific instance. Amended claim 1 recites, “dispatching a first request from the client to a server, said first request specifying a remote procedure call (RPC); receiving a first response from the server, wherein the first response corresponds to a **result of the RPC specified by the first request; in response to the received the result of the RPC of the first response**, measuring a latency from the client's dispatch of the first request to the client's receipt of the first response from the server; appending the latency information to a second request; and dispatching a second request with the latency information from the client to the server, **said second request including another RPC different from the RPC in the first request.**”

Embodiments of the invention permit a server to collect information on actual end-user client experience by, for example, recording request/response (e.g., RPC) latencies and errors observed by the client. (See also Specification, paragraph [0040]). Using FIG. 7 as an illustration, a client uses RPC in a first request to a server. The server receives the request, processes the RPC, and sends the **result of the RPC to**

the client. The client gathers performance data relating to the latency and/or error between the first request is sent and the result is received in response to the received result. The client next incorporates or appends the performance data into a second, and different RPC request to the server. Embodiments of the invention enable the server to accurately measure the quality of the interactions from the client's perspective and without unnecessary or inefficient transmission of data solely for the purpose of transmitting the gathered data to the server.

In contrast, Bland discloses a system that requires **a server request embedded in a response** to the client's initial request. That is, without this server request, the client would not perform any functions regarding performance data collection. This server request triggers an extension of the client to begin gathering the data **in response to the server request**. (See also Bland, col. 5, lines 6-15 specifying "This request is used by extensions 131 of the requested browser 130 as the **impetus** to start collecting the requested data..."). In addition, Bland teaches away from embodiments of the invention by requiring that the gathered data is sent back to the server via the URL embedded in the **server request**. (Bland, col. 5, lines 6-9 stating "the request also specifies the URL (i.e., identifies the server) to which the collected data is to be sent by the requested browser 130"). Bland further requires that the gathered data be sent back to the server by establishing a new and dedicated transmission session. Therefore, Bland cannot anticipate embodiments of the invention as claimed.

As such, amended claim 1 is patentable over the cited art. Claims 2, 4-6 and 10 depend from claim 1 and recite additional features that are also patentable. Hence, the rejection of claims 1-2, 4-6 and 10 under 35 U.S.C. §102(b) should be withdrawn.

Similarly, amended claim 12 recites, in part, "sending a first request from a client to a server, said first request specifying a remote procedure call (RPC)...; receiving, at the client, a first response from the server corresponding to a **result of the RPC specified by the first request; in response to the received result of the RPC**, recording, at the client, a response received time for the first response...; and sending a second request from the client to the server, the second request comprising **another RPC different from the RPC specified by the first request and performance data**,

and the performance data comprising the round trip latency for the first request/response pair." Bland teaches away from embodiments of the invention by requiring that the client to recording a request initiation time for the first request **in response to the server request**, not in response to a received result of the RPC, because the server request is the **impetus** to begin collecting requested data. (Bland, col. 5, line 10). Therefore, Bland cannot anticipate amended claim 12, as well as the dependent claims 13-16, 21 and 27 of independent claim 12. Therefore, claims 12-16, 21, and 27 are patentable over the cited art. Hence, the rejection of claims 12-16, 21, and 27 under 35 U.S.C. §102(b) should be withdrawn.

Also, amended claim 30 recites a computer-implemented method comprising, "sending a first request from a client to a first server, **said first request specifying a remote procedure call (RPC)**; receiving, at the client, a first response from the first server corresponding to a **result of the RPC** specified by the first request; **in response to the received result of the RPC**, recording, at the client, a response received time for the first response...; sending a second request from the client to a second server, the second request comprising **another RPC different from the RPC specified by the first request and** performance data, and the performance data comprising the round trip latency for the first request/response pair." For at least the reasons above, Applicants submit that Bland cannot anticipate embodiments of the invention and that the rejection of claim 30, as well as dependent claim 31, under 35 U.S.C. §102(b) should be withdrawn.

Amended claim 32 recites, in part, "sending a first request from a client to a server, **said first request specifying a remote procedure call (RPC)...;** receiving, at the client, a first response from the server corresponding to a result of the RPC specified by the first request; **in response to the received result of the RPC**, recording, at the client, a response received time for the first response...; storing, at the client, performance data associated with the first request/response pair and a performance data storage time, the performance data comprising the round trip latency for the first request/response pair; sending a second request from the client to the

server, said second request specifying another RPC separate from the RPC specified by the first request...". For at least the reasons above, Applicants submit that claim 32 is patentable over the cited art and that the rejection of claim 32 under 35 U.S.C. §102(b) should be withdrawn.

Amended claim 38 recites a computerized server system comprising, in part, "a performance data stream parse module configured to, at least, parse client-generated performance data from an incoming data stream, **said incoming data stream including client-generated performance data and a remote procedure call (RPC) request...**". Bland teaches away from embodiments of the invention by disclosing that the requested data is sent back to the server **without any other information or request**. In other words, the data that is collected by the client is returned to the URL specified by the server request fails to include non-requested data. Therefore, the server in Bland does not need to parse the requested data from non-requested data. Embodiments of the invention provide an efficient communication between the client and server by having the client append the performance data to a regular RPC request. The server, as claimed by claim 38, parses the performance data from the RPC request and processes the performance data apart from processing the RPC request. Therefore, Bland could not anticipate claim 38. Hence, claim 38 is patentable and the rejection of claim 38 under 35 U.S.C. §102(b) should be withdrawn.

Rejection under 35 U.S.C. §103

Claims 3 and 11 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Bland in view of Burgess et al (US Pat. No 5,696,701). The rejection of claim 3 under 35 U.S.C. §103(a) should be withdrawn because claim 3 has been canceled. Applicants submit that Burgess fails to cure the deficiencies of Bland and that the combined references of Bland and Burgess fail to disclose or suggest each and every element of claim 11.

Amended claim 11 recites, in part, "sending, from a client, a plurality of RPCs to a server; receiving, from the server, a result for each of the plurality of RPCs sent to the server, said result being generated by the server; **in response to the received result**

for each of the plurality of RPCs, monitoring on the client a status of each of the plurality of RPCs sent to the server; appending information regarding the status of the RPC to at least one subsequent RPC that is sent to the server, said subsequent RPC being different from the plurality of the RPCs..."

Applicants submit that the Burgess addresses a different technical problem regarding monitoring performance of computers in computer networks. In particular, Applicants submit that Burgess is unrelated to monitoring of a **status of each of a plurality of RPCs sent to a server**. Furthermore, as Burgess discusses sending of the performance data from a monitoring and tracking agent to a monitoring and tracking listener 18, Burgess nevertheless specifies a traditional means of communicating the performance data to the monitoring and tracking listener 18: sending an RPC from the monitoring and tracking listener 18 to the monitoring and tracking agent; retrieving the performance data from the performance data file and returning the performance data to the monitoring and tracking listener 18. (See also Burgess, col. 9, lines 33-42). Nowhere do Bland and Burgess disclose or suggest "monitoring on the client a **status of each of the plurality of RPCs sent to the server and in response to the received result for each of the plurality of RPCs; appending information regarding the status of the RPC to at least one subsequent RPC that is sent to the server, said subsequent RPC being different from the plurality of the RPCs**" as recited in claim 11.

Therefore, Applicants submit that the Office fails to establish the *prima facie* elements of an obviousness rejection and that the claim 11 is patentable over the cited art. Hence, the rejection of claim 11 under 35 U.S.C. §103(a) should be withdrawn.

Claims 7 and 9 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Bland in view of Cote et al (US Pat. No 5,870,556). Cote, in addition to employing multiple servers, discloses a technique for monitoring links in a messaging system to detect deficiencies involved with delivering messages from a source to a destination across the links. Cote teaches sending a test message to a server across the link and making determinations after a reply is received or after a reply is expected. The reply may include timestamp information that is used to calculate components of a round-trip time. A coded data string, indicating at least the sending time of the test message, is

preferably placed in both the subject and body fields of the test message. Nowhere does Cote disclose or suggest at least, "**in response to the received the result of the RPC of the first response**, measuring a latency from the client's dispatch of the first request to the client's receipt of the first response from the server". Claims 7 and 9 depend from claim 1, and, for at least the reasons above, Applicants submit that claims 7 and 9 are patentable over the cited art because the Office fails to establish the *prima facie* elements of an obviousness rejection. Hence, the rejection of claims 7 and 9 under 35 U.S.C. §103(a) should be withdrawn.

Claim 8 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Bland, and Cote, as applied to claim 7 above, and further in view of Chan et al (US Pat. No. 7,016,909). Claim 8 depends from claim 7, which further depends from claim 1. Chan fails to cure the deficiencies of Bland and Cote because Chan merely describes a system and method for expanding recurring calendar events such that the retrieval of recurring calendar appointments is expedited. Thus, Applicants submit that the combination of Bland, Cote, and Chan For at least the reasons above, Applicants submit that Chan fails to cure the deficiencies of Bland and Cote, and that the Office fails to establish the *prima facie* elements of an obviousness rejection. Therefore, the rejection of claim 8 under 35 U.S.C. §103(a) should be withdrawn.

Claims 28 and 29 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Cote in view of Burgess. For at least the reasons above, Applicants submit that the combined references of Cote and Burgess fail to disclose or suggest each and every element of the invention. Amended claim 28 recites, "sending a first request from a client to a server, said first request specifying a remote procedure call (RPC); **receiving a first response from the server, wherein the first response corresponds to a result of the RPC specified by the first request...**; and sending a second request from the client to the server, and the second request comprising: **another RPC different from the RPC specified by the first request**, an indication of at least one service desired of the server by the client, and performance data, wherein the performance data comprises the error condition corresponding to the first request."

Neither does Cote nor Burgess disclose or suggest that a separate and different RPC request, an indication of at least one service desired by the server, and performance data comprising the error condition corresponding to the first request.

Therefore, Applicants submit that the Office fails to establish the *prima facie* elements of an obviousness rejection and that claim 28 is patentable over the cited art. Claim 29 depends from claim 28 and is also patentable over the cited. Hence, the rejection of claims 28-29 under 35 U.S.C. §103(a) should be withdrawn.

Claims 17-20 and 41 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Bland in view of Chong et al (US Pat. Pub. No. 2004/0064552). Claims 17-20 depend from claim 12. For at least the reasons above with respect to claim 12, Applicants submit that claims 17-20 are patentable. Also, for at least the reasons above with respect to claim 38, 41 is patentable over the cited art because claim 41 depends from claim 38 and includes all patentable features recited in claim 38. Hence, Applicants submit that the Office fails to establish the *prima facie* elements of an obviousness rejection, and that the rejection of claims 17-20 and 41 under 35 U.S.C. §103(a) should be withdrawn.

Claim 22 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Bland in view of "Network Diagnostics Tools Feature Overview" (hereinafter "Network reference"). Claim 22 depends from claim 21 which further depends from claim 12. Therefore, for at least the reasons above with respect to arguments in support of claim 12 and against the Network reference, Applicants submit that the combined references fail to disclose or suggest each and every element of claim 22. Because the Office fails to establish the *prima facie* elements of an obviousness rejection, Applicants submit that the rejection of claim 22 under 35 U.S.C. §103(a) should be withdrawn.

Claim 23 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Bland and Network reference as applied to claim 22 above, and further in view of Day et al. (US Pat. Pub. 2002/0095487). For at least the reasons above, Applicants submit

that Day fails to cure the deficiencies of Bland and Network reference and that the Office fails to establish the *prima facie* elements of an obviousness rejection.

Claims 24-25 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Bland, the Network reference, and Day as applied to claim 23 above, and further in view of Beaven (US Pat. No. 5,627,766). Beaven merely describes having each node of the network to have a network management program installed thereon which includes two independent components: a Point Of Control (POC) program for initiating network tests by injecting a test message into the network and for receiving responses from all the nodes of the network; and a Network Test Program (NTP) for sending a reply message to the single POC for a particular test when the NTP receives test messages within that test. The test is forwarded to all of the current node's adjacent nodes. Test results are analyzed at the POC for display to the network administrator. Nowhere do the combinations of Bland, the Network reference, Day, and Beaven disclose or suggest having a second request from the client which **includes another RPC to the server and performance data regarding the round trip latency for the first request/response pair**. Therefore, the Office fails to establish the *prima facie* elements of an obviousness rejection, and the rejection of claims 24-25 under 35 U.S.C. §103(a) should be withdrawn.

Claim 26 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Bland in view of Cote. For at least the reasons above, Applicants submit that the combined references of claim Bland and Cote fail to disclose or suggest each and every element of claim 26 because claim 26 depends from claim 12. Therefore, the rejection of claim 26 under 35 U.S.C. §103(a) should be withdrawn.

Claim 33 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Bland in view of Caccavale (US Pat. No. 5,664,106). Caccavale merely discusses a method and system for dynamically improving the performance of a server in a network with a tuning system that monitors a workload of the server in real time, a set of internal performance characteristics of the server in real time, and a set of adjustable server

parameters of the server in real time. Caccavale fails to cure the deficiencies of Bland as described and argued above. Therefore, Applicants submit that the Office fails to establish the *prima facie* elements of an obviousness rejection and that the combined references of Bland and Caccavale fail to disclose or suggest each and every element of claim 33. Therefore, the rejection of claim 33 under 35 U.S.C. §103(a) should be withdrawn.

Claims 34 and 40 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Bland in view of Balasubramanian (US Pat. No. 6,874,099). Amended claim 34 recites, in part, “a performance data measurement module configured to, at least: generate performance data..., **wherein the generated performance data and the requests form an incoming stream**; and store the generated performance data in the performance data store...; a performance data stream parse module configured to, at least, parse the incoming data stream for server performance data preferences and store them in the server performance data preference store, **said incoming data stream including generated performance data and requests from the computerized client system.**” Balasubramanian merely describes sending a first test signal to elicit a response from a first element of an application, monitoring the application for the response to the first test signal, and checking the response to the first test signal.

Moreover, Applicants submit that the Balasubramanian teaches away from embodiments of the invention because Balasubramanian requires sending of a test signal, rather than an actual request, such as a remote procedure call, before any testing is initiated. In addition, Balasubramanian, as well as Bland, requires sending a separate message or signal to the application for reporting resulting of the checking of the first test signal. Amended claim 34 recites having the incoming data stream including both the generated performance data and the requests from the computerized client system. Therefore, the combinations of Bland and Balasubramanian cannot disclose or suggest each and every element of claim 34. Because the Office fails to establish the *prima facie* elements of an obviousness rejection, the rejection of claim 34 under 35 U.S.C. §103(a) should be withdrawn.

Claim 40 depend from claim 38 and, for at least the reasons above, claim 40 is patentable over the cited art because the Office fails to establish the *prima facie* elements of an obviousness rejection.

Claim 35-36 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Bland in view of Balasubramanian as applied to claim 34 above, and further in view of Beaven. For at least the reasons above with respect to claim 34, claims 35 and 36 are also patentable over the cited art because of their dependency from claim 34 and of Beaven's failure to cure the deficiencies of Bland and Balasubramanian. Hence, the rejection of claims 35 and 36 under 35 U.S.C. §103(a) should be withdrawn.

Claim 39 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Bland in view of Beaven. Claim 39 depend from claim 38 and, for at least the reasons above, claim 39 is patentable over the cited art because the Office fails to establish the *prima facie* elements of an obviousness rejection.

Claim 42 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Kaluskar (US Pat. No. 7,100,171) in view of "Internet Header Format" (hereinafter "Header Format reference"). Amended claim 42 recites, **"a performance data remote procedure call (RPC) extension tag included in an RPC request for prefacing performance data associated with a client, said performance data RPC extension tag comprising: a performance data format version field; at least one performance data format flag; a performance data size field; and an uncompressed performance data size field; and at least one performance data block relating to the performance data RPC extension tag, said at least one performance data block comprising: a performance data block header, comprising: a performance data block size field; a performance data block format version field; and a performance data block type field; and a performance data block body, wherein the performance data RPC extension tag and the at least one performance data block are incorporated in an RPC in each request/response cycle of the transmission of the RPC."** (See also Specification, paragraphs [0111-0113]).

Applicants submit that the Kaluskar merely describes an auto-evolvable RPC structure and methods of using an auto-evolvable RPC structure. In particular, Kaluskar describes having fields or values of an RPC structure that identifies version identifiers and default values. Nowhere does Kaluskar disclose or suggest having a data structure with performance data associated with a client. In addition, the Header Format reference merely describes Internet header format fields and fails to cure the deficiencies of Kaluskar. Therefore, Applicants submit that the combined references of Kaluskar and the Header Format reference fail to disclose or suggest each and every element of claim 42. Because the Office fails to establish the *prima facie* elements of an obviousness rejection, the rejection of claim 42 under 35 U.S.C. §103(a) should be withdrawn.

Claim 43 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Kaluskar in view of "Internet Header Format" as applied to claim 42 above, and further in view of "Protecting Java Code Via Code Obfuscation" (Low). Claim 43 depends from claim 42 and is also patentable for at least the reasons above. Hence, Applicants submit that the Office fails to establish the *prima facie* elements of an obviousness rejection. Therefore, the rejection of claim 43 under 35 U.S.C. §103(a) should be withdrawn.

Claim 44 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Kaluskar in view of "Internet Header Format" as applied to claim 42 above, and further in view of "TCP Header Format". Claim 44 depends from claim 42 and is also patentable for at least the reasons above. Hence, Applicants submit that the Office fails to establish the *prima facie* elements of an obviousness rejection. Therefore, the rejection of claim 44 under 35 U.S.C. §103(a) should be withdrawn.

Claim 45 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Kaluskar in view of "Internet Header Format" as applied to claim 42 above, and further in view of Beaven and of the Network reference. Claim 45 depends from claim 42 and is also patentable for at least the reasons above. Hence, Applicants submit that the

Office fails to establish the *prima facie* elements of an obviousness rejection. Therefore, the rejection of claim 45 under 35 U.S.C. §103(a) should be withdrawn.

Claim 46 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Kaluskar in view of “Internet Header Format” as applied to claim 42 above, and further in view of Day. Claim 46 depends from claim 42 and is also patentable for at least the reasons above. Hence, Applicants submit that the Office fails to establish the *prima facie* elements of an obviousness rejection. Therefore, the rejection of claim 46 under 35 U.S.C. §103(a) should be withdrawn.

Claims 47-48 and 50 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Kaluskar in view of “Internet Header Format” as applied to claim 42 above, and further in view of Bland. Claims 47-48 and 50 depend from claim 42 and are also patentable for at least the reasons above. Hence, Applicants submit that the Office fails to establish the *prima facie* elements of an obviousness rejection. Therefore, the rejection of claims 47-48 and 50 under 35 U.S.C. §103(a) should be withdrawn.

Claim 49 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Kaluskar in view of “Internet Header Format” as applied to claim 42 above, and further in view of Cote. Claim 49 depends from claim 42 and is also patentable for at least the reasons above. Hence, Applicants submit that the Office fails to establish the *prima facie* elements of an obviousness rejection. Therefore, the rejection of claim 49 under 35 U.S.C. §103(a) should be withdrawn.

In view of the foregoing, Applicant submits that independent claims 1, 11-12, 28, 30, 32, 34, 38, and 42 are allowable over the cited art. The claims depending from these claims are believed to be allowable for at least the same reasons as the independent claims from which they depend.

It is felt that a full and complete response has been made to the Office action and, as such, places the application in condition for allowance. Such allowance is hereby respectfully requested. Although the prior art made of record and not relied

upon may be considered pertinent to the disclosure (e.g., Frank), Applicants submits that Frank neither anticipates nor makes obvious the recited invention because Frank merely discloses or suggests a real-time reconfiguration of a computer network using load information from the computer network. Frank discusses receiving a remote procedure call (RPC) information by a server in the computer network, and the RPC information is analyzed. Based on the analysis, it is determined whether a reconfiguration is required; if reconfiguration is required, one or more objects are relocated until reconfiguration is completed. Nowhere does Frank disclose or suggest one or more features discussed above and recited in the claims. The fact that the Applicant may not have specifically traversed any particular assertion by the Office should not be construed as indicating Applicants' agreement therewith.

The Applicant wishes to expedite prosecution of this application. If the Examiner deems the application as amended to not be in condition for allowance, the Examiner is invited and encouraged to telephone the undersigned to discuss making an Examiner's amendment to place the application in condition for allowance.

The Commissioner is hereby authorized to charge any deficiency or overpayment of any required fee during the entire pendency of this application to Deposit Account No. 19-1345.

Respectfully submitted,

/TAN-CHI YUAN/

Tan-Chi Yuan, Limited Recognition, No. L0113
SENNIGER POWERS
One Metropolitan Square, 16th Floor
St. Louis, Missouri 63102
(314) 231-5400

RMB/ATY/eaw